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ABSTRACT

Secondary teacher education programs were surveyed in order to determine: (1) How widespread is the use of microteaching? (2) Where is microteaching found within the programs? (3) How are selected operational features of microteaching used? (4) With what frequency are selected operational features used? It was found that the number of secondary education programs using microteaching has increased. Microteaching is used most often in general methods courses and subject methods courses. The majority of the institutions use videotape recordings in microlessons and the three most frequently used teaching skills are "fluency in asking questions," "providing reinforcement," and "using praise." (JD)

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A Survey of Microteaching in Secondary Teacher Education Programs of NCATE Accredited Colleges and Universities

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A Survey of Microteaching

The Purpose

The major purpose of this study was to survey and evaluate the use of microteaching in secondary teacher education programs in the United States. In order to accomplish that purpose, the following questions were raised: (1) How widespread is the use of microteaching among secondary teacher education programs? (2) Where is microteaching found within the programs which use microteaching? (3) How and with what frequency are selected operational features of microteaching utilized?

Delimitations and Scope

This survey was concerned with the use of microteaching in secondary teacher education programs of the 541 colleges and universities accredited by NCATE for the 1977-1978 school year. Through the use of the survey questionnaire, it was determined that 237 institutions used microteaching in their secondary teacher education programs.

Procedures

In order to provide a proper background and understanding of the topic, a survey of related research and literature was conducted. The topics of this survey were: (1) the development and value of microteaching; (2) microteaching variables; and (3) microteaching skills and student achievement.

Chairpersons of secondary teacher education

departments of the 541 NCATE accredited colleges and universities in the United States were surveyed in order to determine which institutions were using microteaching in their secondary teacher education programs. Three-hundred and fifty institutions reported that microteaching was being used and agreed to participate in this study. The survey questionnaire was sent to individuals knowledgeable of the use of microteaching in each of those institutions. Questionnaires were received from 269 of those individuals. Of those replies, 237 were found to be using microteaching and comprised the population of this study.

Survey of Related Literature

A survey of related literature was conducted in order to provide a background for the study. The topics of the literature survey were:

1. Reports concerning the development of microteaching and substantive research related to the value of microteaching.

2. Imperical research and descriptive reports relevant to specific micoteaching variables.

3. Micoteaching skills and student achievement.

Based upon this survey, the following conclusions were drawn:

Microteaching was developed at Stanford University by Dwight Allen and his associates in 1963 (Allen and Gross, 1965; Allen, 1966: Allen and Clark, 1967). Microteaching

proved to be more effective than traditional teacher training methods in bringing about specific behavioral skills in teacher trainees. (Allen, 1967; Ward, 1970; Davis and Smoot, 1970; Shea, 1974) Accepted components of microteaching include:

1. The scaling down of a teaching encounter in terms of time (5 to 20 minutes) and number of students (3 to 20). (Olivero, 1970; Allen and Clark, 1967; Allen and Gross, 1965).

2. A teach-critique, reteach-critique cycle. (Allen and Gross, 1965; Allen, 1967; Olivero, 1970).

3. An expanded feedback dimension in which performance feedback is provided via audiotape, videotape, written transcriptions and comments on the performance are provided by peers, the microclass, a college supervisor, a supervising teacher, or by the microteacher. (Allen and Cooper, 1970; Allen, 1967; Rousch, 1969; Allen and Eve, 1968).

4. Modeling protocols of the desired behaviors via film, videotape, audiotape, live or written examples. (Orme, 1966; Young, 1968; Gall, 1972; Acheson, 1974; Olivero, 1970). Focused feedback of the microteaching encounter to the microteacher is an effective component of microteaching. However, the most effective feedback strategy may depend upon the nature of the skill to be acquired. (Allen, McDonald and Orme, 1969; Acheson, 1964;

Clause, 1969; Solomon and McDonald 1970; Rezler and Anderson, 1971; Shively, et al., 1970). Modeling protocols are an effective adjunct to microteaching. However, the effectiveness of various media for modeling depends upon the nature of the skill to be acquired. For example, if the skill is primarily a verbal one, audiotape models may be more effective than videotape models. (Orme, 1966; Young, 1968; Gall et al., 1972; Acheson, 1974). Once acquired, microteaching skills persist over extended periods of time and may be incorporated into the teacher's classroom behaviors. (Borg 1970, 1975).

The question of whether or not the use of microteaching skills is related to subsequent student achievement was reviewed. Various problems which were present in such an analysis of literature included:

1. No true experimental studies in which teaching behaviors were independent variables and student achievement were the dependent variables could be located.

2. The reliance upon correlational studies precluded drawing inferences of causal relationships on any teaching behavior and student achievement.

3. The instruments of behavior coding for studies reviewed resulted in a considerable amount of overlap among the behavioral components of microteaching skills.

As a result, the writer was able only to document trends in the literature. An interesting summary of these

trends was presented by Rosenshine (1971). He concluded that five teaching skills which showed the greatest promise in terms of student achievement were: (1) clarity, (2) variability, (3) enthusiasm (4) task oriented/ businesslike behavior and (5) student opportunity to learn criterion material. It should be noted that all of these are high-inference variables for which low inference behavioral correlates have not been established. Rosenshine also reported on six teaching behaviors which were often positively correlated with student achievement, but the evidence was less convincing for these skills. They were: (1) use of students' ideas and indirectness, (2) criticism, (3) use of structuring comments, (4) types of questions (5) probing, and (6) level of difficulty. While those skills were less confidently included, the general trend of the finding was in a positive direction. (Rosenshine, 1971, p. 54).

Rosenshine (p. 55) reported that the following teacher behaviors had not shown a significant, positive or consistent relationship with student achievement to date: (1) non-verbal approval, (2) praise, (3) warmth, (4) indirectness to directness ratio, (5) high and low questions, (6) teacher talk, (7) student talk, (8) student participation, (9) number of student-teacher interactions, (10) student absence, (11) teacher absence, (12) teacher preparation time, (13) teacher experience, and (14) teacher

knowledge of subject area.

To date, the evidence will not support the contention that teachers trained in the use of microteaching skills will produce greater student achievement than will teachers trained in other types of programs. One might argue that available evidence would warrant the development of a new set of microteaching skills based upon current evidence of the relationships between teachers' behaviors and student achievement. Yet, because of the nature of the research to date, one still could not predict that the new microteaching skills would be any more beneficial than the present ones. The literature does suggest an urgent need for experimental research into teaching behaviors and student achievement. The present study attempted to determine if the frequency of use of microteaching skills or the importance attached to microteaching skills in secondary education departments had any relationship to the research trends reported above.

Findings

Data from the survey questionnaire was organized to address the major questions of the study. The data was also tabulated to provide comparisons between the findings of this study and a similar study conducted by Ward in 1969. The following is a summary of the most pertinent findings revealed by the data. Those findings

were:

1. The number of secondary education programs using microteaching had increased from 141 to 1969 to 237 in 1978. This was an increase in both the number and percentage of NCATE accredited secondary education programs which used microteaching.

2. Most institutions involved less than 75 students in microteaching each academic session.

3. The majority of institutions had used microteaching for seven years or longer. For those institutions, microteaching was no longer a "new" technique.

4. Microteaching was used most often in general methods courses and subject methods courses. There had been little change in the types of courses using microteaching since 1969. However, there were slight increases in the use of microteaching in introductory education courses, separate microteaching courses, and in "other" education courses.

5. A designated microteaching laboratory was used for microteaching by 49 percent of the institutions. Other, less frequently used facilities included: public or private school classrooms; experimental or campus school classrooms; and television studios.

6. Eleven percent of the institutions utilized the complete microteaching cycle on a regular basis. The percentage of microteaching programs utilizing the complete microteaching cycle had declined from 24 percent in 1969 to 11.6

percent in 1978.

7. Seventy-five percent of institutions provided four or fewer microteaching encounters for each student. The institutions which utilized the complete microteaching cycle, (R-institutions), provided more microteaching encounters for each student.

8. The microclass was frequently comprised of "peer" students in 82.7 percent of institutions and of "real" secondary students in 23.6 percent of institutions. The R-institutions used real secondary students with greater frequency than did the other institutions.

9. Seventy-two percent of institutions frequently made videotape recordings of the microlesson, while 18.1 percent of institutions frequently made audiotape recordings of the microlesson.

10. The most frequently used forms of feedback to the microteacher were discussion of the microlesson with a college supervisor, a critique of the initial microlesson, viewing of a videotape of the microlesson, and a discussion of the performance with peers.

11. Frequently utilized modeling protocols included: live demonstrations by 84.8 percent and videotapes or films of both positive and negative examples by 29.5 percent. Information about teaching skills was provided most often by written descriptions or by lecture/discussions. Audiotapes of both positive and negative examples of teaching skills were frequently used by only 8 percent of institu-

tions:

12. Portable videotape recorders were usually available in 78.5 percent of institutions, and portable audiotape recorders were usually available in 77.2 percent of institutions.

13. Portable videotape recorders were frequently used in 60.7 percent of institutions, while portable audiotape recorders were frequently used in only 18.1 percent of institutions.

14. Eighty-eight percent of institutions had developed some portion of their microteaching materials in-house. Forty-eight percent of institutions reported that some portion of their microteaching materials had originated at Stanford University.

15. Microteaching media most frequently available in institutions included: written evaluation instruments on teaching behaviors in 72.1 percent; printed descriptions in 70.4 percent; films in 53.6 percent; and videotapes in 57.8 percent of institutions.

16. The three most important teaching skills, as ranked by respondents, were "providing reinforcement," "using a variety of instructional activities" and "using a variety of instructional materials" in that order.

17. The three most frequently used teaching skills, as judged by respondents, were "fluency in asking questions," "providing reinforcement," and "using praise" in that order.

18. There was a positive correlation, $r = .77$, ($p. < .01$), between the importance and use of teaching

skills as ranked by respondents. There was a positive, but not statistically significant, correlation between the rankings of importance of teaching skills by respondents to this survey and by respondents to Ward's survey of 1969.

20. The rankings of importance and use of twenty teaching skills by respondents were generally consistent with the summaries of research on teaching skills and student achievement. However, the rankings appeared inconsistent for seven of the twenty skills.

21. A wide variety of teaching skills were practiced within the microteaching settings. In addition the thirty-two teaching skills listed in the survey questionnaire, respondents listed 129 teaching skills that they used in microteaching.

Conclusions and Recommendations

The findings of this study justified the following conclusions and recommendations. These conclusions were based upon the information gathered from the 237 colleges and universities which used microteaching in their secondary teacher education programs.

1. Both the number and percentage of NCATE accredited secondary education programs which use microteaching had increased since 1969. A majority of the programs which used microteaching had done so for seven

years or longer. For this majority of users, microteaching was no longer a "new" technique.

2. Microteaching continued to be used most often in general methods and subject methods courses. Since 1969, there had been a slight increase in the percent of programs which offered a separate microteaching course or which used microteaching in "other" courses.

3. Most programs involved less than 75 students in microteaching each session and provided those students with few (less than four) microteaching encounters.

4. The complete microteaching cycle was used on a regular basis by 11 percent of institutions. Those institutions more frequently had access to media for microteaching, provided more encounters for each student and used "real" secondary students to comprise the microclass more frequently than other institutions.

5. The microclass was usually comprised of "peer" students rather than "real" secondary students. However, 23.6 percent of institutions reported that "real" secondary students were frequently used.

6. Videotape recordings of the microlesson were widely used by institutions to provide feedback to the microteacher. This usage appears to be justified by research findings. However, while research findings support the use of audio recordings for feedback on teaching skills that are primarily verbal, the use of audiotape

recordings to provide feedback was quite low.

7. Most programs had written evaluation instruments and written descriptions of microteaching skills available. Fewer programs had films or videotapes of microteaching skills and procedures available. Most of the materials utilized had been developed in-house. There appears to be a need for greater access to films and videotapes on microteaching and teaching skills among institutions using microteaching.

8. Respondents felt that the teaching skills listed in the survey questionnaire were important ones, and they frequently practiced those skills in microteaching.

9. Respondents' ratings of teaching skills were generally consistent with research trends relevant to teaching skills and student achievement.

Based upon the findings and conclusions of this study, the following recommendations were made:

1. Programs using microteaching should utilize audio feedback and audio models for the acquisition of teaching skills which are primarily verbal ones.

2. There should be greater access to prerecorded audiotapes, films, and videotapes about microteaching and specific teaching skills.

3. Microteaching users should have greater access to microteaching laboratories and classrooms with "real"

secondary students.

4. Modeling protocols, (such as films, audio-tapes and videotapes), should be employed to a greater extent for the acquisition of specific teaching skills.

5. There should be further research concerning the relationship between teaching skills and student achievement for secondary students.

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